3/29/96 A.2

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor
Kathy Prosser
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

March 29, 1996

Ms. Sheri Bianchin
Remedial Project Manager, HSRL-6J
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

Dear Ms. Bianchin:

RE: First Draft, Technical Memorandum, Upper Aquifer Investigation, Monitoring Well and Sampling Protocol, American Chemical Services, Inc., Griffith, Lake County, Indiana

Staff of the Indiana Department of Environmental Management, Office of Environmental Response have reviewed the First Draft, Technical Memorandum, Upper Aquifer Investigation, Monitoring Well and Sampling Protocol for the American Chemical Services, Inc. NPL Site located in the town of Griffith, Lake County, Indiana. The following comments have been generated through staff review of the document.

General Comments

[1] It is unclear whether the residential well discussion and represented locations refer to all or part of the area residential wells. The document needs to illustrate the location of all private wells near the site, and discuss sampling those that may potentially be impacted by contamination migrating off-site. In addition, the report needs to state the intended analytical parameters for the proposed residential well samples. These issues need to be addressed in the document.

[2] The number and location of proposed additional upper aquifer monitoring wells appears inadequate, however, the presentation of data makes it difficult to adequately determine where additional wells are needed. Contour maps illustrating benzene, acetone, and total organic compound concentrations need to be provided to evaluate the distribution of these contaminants, and the appropriate locations of additional monitoring wells. In addition, a map needs to be provided that illustrates *all* existing upper aquifer monitoring wells and piezometers, as well as proposed additional monitoring wells and groundwater elevation contours.

Specific Comments

[3] Page 1, paragraph 4. The report states that the top-of-casing elevations for piezometer P-52 and monitoring well MW-18 were resurveyed during the Upper Aquifer investigation. The new survey values are presented, but the document does not discuss the difference between the old survey values or state the effect on the groundwater flow patterns.

[4] Page 5 and 6, Results and Conclusions. The document states the reasons for the presence of acetone at the site, including analytical difficulties, common laboratory contaminant and identification of acetone in vegetation, insects, and bacteria as a naturally occurring metabolite. Before the validity of the aforementioned claims, with regard to acetone, can be evaluated, supporting technical documentation must be provided. Confirmatory samples which will be analyzed under strict QA/QC protocols and validation criteria are necessary. In addition, scientific documentation which discusses that acetone is naturally occurring in a wetland environment should be provided. When evaluating the concentrations (ranging from non-detect to 50,600 ppb) as provided in this document, it is unlikely that the acetone is naturally occurring. Acetone is not easily formed due to the need to form a double bond. When alcohols breakdown, the final compounds to be formed would be methane and water. Furthermore, acetone is very volatile and may well volatilize off during the exothermic reaction produced during the breakdown process of the alcohols and the resultant methane. Thus, very minimal amount would be present, if at all. In addition, acetone has the potential to migrate as rapidly and/or more rapidly as benzene which may explain why acetone is found at the leading edge of the groundwater plume.

[5] Page 6, paragraph 2. As discussed above, this states that low concentrations of acetone detected during the investigation "...should be viewed as probable instrument cross-contamination or naturally occurring breakdown products rather than viewed as representative of groundwater contamination." Based upon the frequency and magnitude of acetone detections this statement appears presumptuous.

[6] Page 10, Area C bullet. This references a monitoring well "MW01". It appears that this reference is for the Griffith Landfill well, M-1S. This needs to be corrected, to prevent confusion with the ACS MW-01 well that was destroyed in 1990.

[7] Page 11, paragraph 2. As previously discussed, there may be additional residences which will need to be included in this sampling round. The residential well samples should be analyzed for the full scan of analytical parameters to be the most protective of human health. Also, please include a discussion of the local businesses in the area, including if the businesses have a private well which is used as a potable drinking water source. Include on a figure the location of the municipal water supply lines and provide a brief discussion of the municipal water supply. This will eliminate any confusion as to the

elimination of certain residences/businesses from sampling consideration in the vicinity of the site.

[8] Page 11, last paragraph. This states that "One surface water sample was collected near P-61 north of the ACS facility (Figure 2)." The report previously states that the sample was collected near piezometer P-63, and Figure 2 does not illustrate the location of the surface water sample. This needs to be corrected. Furthermore, no conclusion is provided on how the Respondents intend to proceed based on this new information. Please clarify.

[9] Table 1, Summary of Sample Coordinates and Depths. The text indicates that GP-54 was not sampled. This table does not list GP-5, however the sampling location should be included with a notation that a sample was not collected. Please also incorporate the east/north feet coordinates.

[10] Table 2, Tabulation of Selected VOC Detections Upper Aquifer Investigation. The column for total VOCs appears to be misleading. It appears that the total column is a total of acetone, benzene and BTEX columns. Clarification of which VOCs comprise this total VOCs column is needed.

[11] Appendix A. Please place a title on the table. In addition, several items need clarification, including: [a] provide explanation for certain concentrations being placed in italics; [b] as previously discussed, the total VOCs column appears confusing and needs additional clarification; [c] on page 2 of 15, GP-60 indicates and acetone concentration of 3560 with an asterisk. Provide a footnote to explain the meaning of the asterisk; and [d] The nomenclature utilized for trip blanks and field blanks is inconsistent throughout the table (ie., GPTB01 1/24/96, GP-1/26/96/TB, TB 2/1/96). Please correct the inconsistencies.

[12] Appendix B. No information or data was presented. Please provide the information which was supposed to be included in this appendix.

Staff would appreciate receiving a copy of the comments submitted to the Respondents by the United States Environmental Protection Agency. If you have any questions or concerns, please feel free to contact me directly at 317/308-3116.

Sincerely,

Holly Grejda, Project Manager
Superfund Section
Office of Environmental Response

cc: K. Grindstaff, IDEM